

***Safety Assurance and
Compliance Program Report
for
CSX TRANSPORTATION, INC.***

THE EXECUTIVE SUMMARY

Overview

PURPOSE FOR REPORT:

The Federal Railroad Administration¹ (FRA) conducted a major safety audit of the CSX Transportation, Incorporated's (CSXT) system from July through September 1997. This report highlights FRA's findings. It is organized into five chapters which specify FRA findings by functional area: *Signal and Train Control*; *Hazardous Materials*; *Operating Practices*; *Motive Power and Equipment*; and, *Track*.

TEAM REVIEW METHODOLOGY--THE S A C P APPROACH:

To review the CSXT safety processes, FRA utilized a multi-discipline team audit strategy based on the Safety Assurance and Compliance Program (SACP) model². SACP's focus is to identify and remedy root causes of safety concerns across an entire railroad system. The program, which emphasizes a collaborative approach to systemic fixes, can only be successful if it involves full participation in the process by railroad labor and management, and FRA, in an atmosphere of openness and trust.

CSXT RESPONSE:

The information in this report represents FRA findings during the audit period. However, CSXT and its rail labor leaders did not wait for FRA to issue a final report before acting on FRA's findings. In cooperation with FRA, they have initiated over 250 corrective projects addressing FRA concerns. In addition, 16 teams (which include representation by railroad labor and management, and FRA) are collaborating, through SACP, to find

¹ Throughout this report, reference to "FRA" includes by inference all FRA and State regulatory and safety specialists who participated in the project.

² For a more complete description of SACP, see the Report to Congress entitled "*ENHANCING RAIL SAFETY NOW AND INTO THE 21st CENTURY*," published in October 1996.

permanent solutions to safety issues. FRA applauds CSXT's proactive response. Upon receipt of the final report, CSXT will supplement already ongoing activities to address any issues or concerns requiring additional focus.

The Need to Do More

BACKGROUND:

In October 1995, FRA initiated a SACP review of CSXT. Working with CSXT's management and rail labor organizations, FRA identified a number of safety concerns, including the quality of train brake inspections, and quality of employee safety management, especially bridge worker safety. CSXT responded with corrective actions, which has helped the railroad to maintain a good overall record of safety performance since that time.

RECENT INCIDENTS:

Despite generally good safety performance since the initial SACP process in 1995, a series of five incidents this summer caused FRA to escalate its ongoing safety oversight of CSXT. Particulars of these incidents follow:

- ! One fatality and two employee injuries occurred when a CSXT freight train collided with the rear end of another CSXT freight train in St. Albans, West Virginia.
- ! A CSXT freight train derailed 34 cars near Marianna, Florida, including 17 placarded hazardous materials (HM) tank cars (13 cars were loaded and four contained residue). Five loads leaked product, resulting in a 4-hour evacuation of local citizens around the derailment site.
- ! A CSXT intermodal freight train (with a shifted trailer on a flat car) derailed near Rosslyn, Virginia and side-swiped a passing Amtrak passenger train. Fortunately, no serious injuries were sustained, although damage was extensive.
- ! A truck trailer loaded with waste paper fell off a CSXT flat car in Baltimore, Maryland, after an undesired emergency application of the air brakes. There were no injuries.

- ! An eastbound CSXT freight train with a shifted load side-swiped a passing westbound CSXT freight train in Lawrenceville, Illinois. Six cars derailed, including a placarded HM tank car (containing residue), which was punctured in the pile up and then caught fire.

To stem this sudden trend, FRA immediately accelerated and broadened the ongoing safety oversight of CSXT. Large, multi-disciplinary teams were dispatched to examine every facet of CSXT's system operations. In all, over 75 FRA safety specialists from across the United States, and State safety specialists from the States of Virginia, Florida, West Virginia, Illinois, and Ohio, provided comprehensive analysis of CSXT practices. FRA, railroad management, and labor representatives quickly established joint working groups which met initially in early July 1997. Those teams continue to meet today as they work to prioritize and resolve safety issues.

The Role of Safety Culture

RAILROAD SAFETY CULTURE:

The ability to eliminate safety hazards and promote prevention of injuries, collisions, and derailments, is dependent upon an atmosphere of mutual trust, respect, and openness. Unfortunately, for decades, the railroad industry has been characterized by a culture that engenders an adversarial relationship between management and labor rather than one of cooperation. Getting the job done without admitting a need for help is the standard, leading to reluctance to ever take "bad news to the boss." The significance of this culture as an impediment to maximizing safety performance is readily evident throughout the U.S. rail system. FRA has therefore made it a priority to include the issue of safety culture as part of all SACP efforts.

FRA's observations and employee testimonials have revealed that CSXT has an adversarial safety culture. Throughout this report, FRA identifies examples of this culture, such as instances in which line managers made decisions about train operations which compromised safety, despite the concern of their staff. Only through a true commitment to *safety first at every level in the organization*, can a viable safety culture be developed and sustained.

Summary of Specific FRA Findings by Functional Area

The following section summarizes FRA's key findings during the audit period (more detailed discussion of each issue is provided in the report narrative).

Signals and Train Control

FRA findings revealed that CSXT needs to more effectively manage its signal and train control operations in the following areas:

- ! Staffing and Training
- ! Pole Line Maintenance
- ! Insulated Rail Joint Maintenance
- ! Preview and Visibility of Signals
- ! Circuit Plans
- ! Power and Hand-Operated Switches

FRA found a general lack of consistency in maintaining a comprehensive signal oversight program. According to employees and supervisors that FRA contacted, part of the problem may be associated with the level of staffing and training provided.

For example:

- ! FRA inspectors repeatedly found instances in which supervisors had insufficient time to devote to their main objectives (supporting, coaching, mentoring, and training signal employees) due to administrative duties. These concerns were substantiated by the high defect ratios FRA encountered during inspections.
- ! FRA saw sections of right-of-way with poorly maintained pole line (wires with excessive slack, broken poles and cross arms, broken or loose insulators, wires lying on the ground, and overgrown vegetation interfering with wires).
- ! FRA also found insulated joints defective in a number of locations due to missing end posts and/or deteriorated insulation.
- ! A number of wayside signals and grade crossing lights had poor preview and visibility to approaching trains.

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- ! FRA documented instances where circuit plans were incorrect, incomplete, illegible, or missing.
- ! FRA noted that many power and hand-operated switches were defective with loose and ineffective braces and fasteners, improper anchoring of the rail, and defective head block ties.

Operating Practices

FRA documented inadequacies in administration of operating practices requirements in the follow areas:

- ! Efficiency Testing
- ! Locomotive Engineer Certification
- ! Accident/Incident Reporting
- ! Alcohol and Drug Testing
- ! Dispatching Concerns
- ! Crew Management Center

Operational Testing:

CSXT's operational testing program, on paper, appears detailed and well-conceived. However, FRA took exception to the implementation of the program.

For example:

- ! There was little evidence that quality operational tests were conducted as required by Federal regulations and CSXT program parameters.
- ! CSXT management has generally not taken full advantage of this important tool as a means to identify additional safety opportunities to reduce the potential for human factors incidents.
- ! Employees do not normally get feedback on their test performance unless they fail the test. Such feedback is normally in the context of a disciplinary hearing. Little value results since the process becomes one promoting adversarial outcomes rather than a positive learning experience.

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- ! CSXT provided little training to designated testing officers to provide them a base upon which to build effective testing scenarios.
- ! Finally, there has been little quality testing of train dispatchers despite their critical safety role in the operation.

Crew Management:

Problems at CSXT's crew management center were identified early in the process. Specific issues included inefficiencies in crew calling which added to extended duty days and overall fatigue for operating crews. To illustrate the degree of the problem, FRA found an instance in which a computer glitch resulted in some employees being called every 20 minutes by the automated but malfunctioning system, thoroughly interrupting their rest period. In addition, FRA believes that the crew management center staff is regularly overwhelmed by the demands of the job. Consequently, service to employees suffers. The number of telephone lines available in the center was insufficient to provide ready access to crew dispatchers.

Records Compliance:

FRA's investigation revealed that CSXT was not efficiently managing all reporting records required by FRA. For example, accident/incident records for reportable employee injuries and illnesses, and rail equipment accidents and incidents, were lacking in some areas. FRA discovered in a "snapshot" review of records a total of 25 instances where reportable accidents and incidents had not been reported to FRA as required. The failure to report these incidents caused CSXT's overall safety numbers to be artificially low in that reporting period.

Likewise, CSXT was unable to provide an accurate list of certified engineers as required by the regulations. FRA also documented instances where CSXT did not comply with all record-keeping provisions of the Federal alcohol and drug testing protocol. Specifically, FRA found that CSXT improperly used Federal forms to conduct "for cause" testing under its collective bargaining agreement.

Hazardous Materials

FRA noted deficiencies in the following areas of CSXT's HM operations:

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- ! Train Consist Accuracy
- ! TOFC/COFC Documentation
- ! Placard Compliance
- ! Training of Personnel

For example:

- ! FRA noted three separate instances in which CSXT personnel knowingly ordered defective or non-compliant tank cars to be moved in violation of Federal regulations.
- ! Inaccurate train consists were encountered repeatedly by FRA inspectors. In addition, FRA noted a trend in which HM loads inside trailers-on-flat cars (TOFC) and containers-on-flat cars (COFC) were moved with insufficient or missing documentation.
- ! CSXT did not have a consistent or standard methodology to ensure that HM cars were properly placarded, or, that missing, worn, or faded placards were replaced as needed en route.
- ! Finally, not all CSXT employees requiring hazardous materials training have been provided sufficient training to inspect and monitor hazardous materials shipments.

Track

A major portion of CSXT track is in good condition and fully compliant with Federal track safety standards. However, FRA found that CSXT lacks a fully consistent and sound track program across all parts of the system. Exceptions were noted by FRA in the following areas:

- ! Track Inspections
- ! Control of Water Saturation on Track Structures
- ! Vegetation Control
- ! Roadway Worker Protection Compliance
- ! Test Car Operation
- ! Procedure Manual
- ! Defective Rail Detection

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FRA determined that some CSXT track inspections and maintenance goals are based solely on the minimum Federal standards rather than more comprehensive CSXT standards.

During inspections, FRA found defects on main tracks, including overgrown vegetation, saturated subgrade, and defective rails. In 1996, there were nine reportable main track derailments caused by defective rails. The Rivanna subdivision, in particular, has had four rail-caused derailments since the beginning of 1996.

FRA determined that while CSXT utilizes a track geometry testing car, the results produced are not always properly verified, interpreted, or corrected.

Finally, FRA believes CSXT's application of the Federal Roadway Worker Protection requirements needs more centralized oversight by engineering managers to minimize risks for employees working on or near the railroad rights-of-way.

Motive Power & Equipment

CSXT's administration of maintenance programs for cars and locomotives needs stricter management oversight. Problem areas FRA encountered included:

- ! Locomotive Inspections
- ! TOFC/COFC Securement

CSXT's practice of inspecting locomotives on a 122-day cycle does not comply with requirements of the Federal regulations which specify that 92-day inspections be conducted. The quality of inspections also needs to be a recurrent subject of supervisory focus.

In terms of TOFC/COFC securement, FRA found that CSXT's program lacked direction. CSXT has contracted out most of its trailer/container loading. As a result, railroad oversight of quality control processes has diminished to the point where railroad follow-up inspections are ineffectual. Consequently, trailers are accepted on CSXT lines with little assurance that proper loading or securement steps have been taken.

Summary of General Conclusions

Based on analysis of findings, FRA developed the following conclusions about CSXT's culture and operations:

- ! *"SAFETY FIRST" IS NOT UNIVERSALLY OBSERVED*-- FRA found an atmosphere on CSXT in which some CSXT field managers consistently failed to demonstrate full commitment to safety. Some front-line managers emphasized train operations over safety considerations. For example, FRA witnessed two occasions in which locomotives (with known intermittent electrical ground faults) were dispatched from repair facilities. In another example, a leaking tank car was dispatched from a terminal by a management official to avoid a delay in car transit.³

Such management actions have led some employees to doubt senior management claims that "Safety is first, foremost, and always." In fact, some CSXT employees told FRA inspectors that they believe they must involve FRA to ensure corrective action for identified safety hazards.

- ! *HARASSMENT AND INTIMIDATION ARE EVIDENT*-- CSXT has not created a universal atmosphere where safety performance and risk reduction are rewarded. Many employees in various departments and locations reported to FRA inspectors that they felt harassed or intimidated when they raised safety concerns that might interfere with train operations. For example, FRA noted an instance where a locomotive was ordered out of a terminal without allowing a mechanic to finish a required daily inspection. The mechanic was ordered by the operating supervisor to allow the locomotive to depart or face consequences. Open dialogue and common resolve to address safety hazards is jeopardized by this overriding theme. Many employees simply do not feel ownership in the safety program, since being a safety advocate does not appear to be valued by some managers.

- ! *POOR COMMUNICATIONS HAVE NEGATIVELY IMPACTED SAFETY*-- CSXT's communications infrastructure is not sufficient to eliminate known safety

³ FRA is processing individual liability cases against individuals engaged in willful violations.

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hazards. For example, on October 9, 1997, near Savannah, Georgia, an Amtrak train collided with a “lowboy” truck trailer that lodged itself on the street crossing. Based on FRA’s preliminary review, which is continuing with the National Transportation Safety Board, FRA learned that a local police officer had notified the CSXT dispatching center that the truck was stuck almost 30 minutes prior to the collision. Despite the advance call, no warning was provided to the crew of the approaching Amtrak train, and a collision resulted. The entire Amtrak train derailed with injuries to passengers and crew. Less than 12 hours after the incident, FRA Administrator Jolene M. Molitoris and CSXT President Pete Carpenter signed a comprehensive “Safety Action Agreement” undertaking measures designed to improve communication and eliminate such hazards.

Conclusion

Over the years, CSXT has demonstrated an improved safety record and top level commitment to safety. The findings documented by the FRA teams during the audit indicate that senior CSXT leadership must build upon past successes, while moving forward to address the shortfalls identified in this report.

FRA extends appreciation to all who participated in the safety review, especially the professional craft employees who took time to share their perspectives, concerns, and recommendations. Clearly, the employees who operate and maintain the railroad and equipment are the best group of safety consultants any railroad could have.

Federal Railroad Administration
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